Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy		DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603382N: *Advanced Combat Systems Tech*

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	12.071	3.662	1.658	0.000	1.658	1.677	1.776	1.865	2.047	Continuing	Continuing
0324: *Adv Combat System Technology*	9.279	1.670	1.658	0.000	1.658	1.677	1.776	1.865	2.047	Continuing	Continuing
9999: *Congressional Adds*	2.792	1.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.175

A. Mission Description and Budget Item Justification

The Advanced Combat System Technology line is intended to evolve the technical and business practices for programs to change to an open architecture construct. The program was constructed to mature both technical and business model integration for warfare systems programs of record in an open architecture environment. The original priority was the design of incorporating the principles of modular design and design disclosure, reusable application software, interoperability and secure information exchange, lifecycle affordability and encouraging competition and collaboration.

Project Unit 0324: Funding is limited to maintaining a repository environment that is intended to improve transparency of design disclosure and to support the principle of cross-domain reuse. The other elements of the Naval Open Architectures (OA) transformation effort are only to be accomplished as efficiencies in managing the repository are achieved. Those elements include; ensuring that all Naval systems, family of systems, and programs move to modular OA in accordance with Department of Defense (DOD) 5000.1 dated 12 May 2003 which mandates all DOD programs to utilize open systems architecture in order to rapidly field affordable, interoperable systems. By direction of the Navy Service Acquisition Executive (SAE), PEO IWS is assigned overall responsibility and authority to direct the Navy's OA effort. That policy established a need to coordinate acquisition strategies, develop guidance, and develop analysis of alternatives to determine OA software reuse practices within and across all Navy Communities of Interest (COI - Surface, Subsurface, Air, Space, and C4I). This project was also to work closely with the T&E and certification communities in defining regression testing and certification requirements for all OA Commercial Off-the-Shelf upgrades and software reuse applications. This project seeks to create a strategic shift in the acquisition process to facilitate cooperative cross-domain/COI business relationships. This will improve economies of scale throughout the Navy. This development effort will identify the business case and return on investment for moving the Navy towards an open systems approach, support the development of open systems technologies, and integrate best practices for open systems development within Naval acquisition. This Naval OA project would have ensured Navy-wide system architectures would become extensible and scalable in function, capacity, and workload to meet Joint warfighting requirements. This also includes the identification and development of common software components, functions, and reuse methodologies. In summary, this funding supports only the management of a reuse repository and can be used to evolve business, systems engineering and cultural changes required across all Naval programs as they are migrated to function in a joint net centric warfare environment.

Exhibit R-2, **RDT&E Budget Item Justification:** PB 2011 Navy	**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603382N: *Advanced Combat Systems Tech*

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	7.121	1.677	0.000	0.000	0.000
Current President's Budget	12.071	3.662	1.658	0.000	1.658
Total Adjustments	4.950	1.985	1.658	0.000	1.658
• Congressional General Reductions		-0.015			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		2.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	4.994	0.000			
• SBIR/STTR Transfer	-0.044	0.000			
• Program Adjustments	0.000	0.000	1.658	0.000	1.658

Congressional Add Details ($ in Millions, and Includes General Reductions)

	FY 2009	FY 2010
Project: 9999: *Congressional Adds*		
Congressional Add: *OpenArchitecture/Maintenance Free Operating Period*	2.792	1.992
Congressional Add Subtotals for Project: 9999	2.792	1.992
Congressional Add Totals for all Projects	2.792	1.992

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603382N: *Advanced Combat Systems Tech*	PROJECT 0324: *Adv Combat System Technology*

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
0324: *Adv Combat System Technology*	9.279	1.670	1.658	0.000	1.658	1.677	1.776	1.865	2.047	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Project Unit 0324: Funding is limited to maintaining a repository environment that is intended to improve transparency of design disclosure and to support the principle of cross-domain reuse. The other elements of the Naval Open Architectures (OA) transformation effort are only to be accomplished as efficiencies in managing the repository are achieved. Those elements include; ensuring that all Naval systems, family of systems, and programs move to modular OA in accordance with Department of Defense (DOD) 5000.1 dated 12 May 2003 which mandates all DOD programs to utilize open systems architecture in order to rapidly field affordable, interoperable systems. By direction of the Navy Service Acquisition Executive (SAE), PEO IWS is assigned overall responsibility and authority to direct the Navy's OA effort. That policy established a need to coordinate acquisition strategies, develop guidance, and develop analysis of alternatives to determine OA software reuse practices within and across all Navy Communities of Interest (COI - Surface, Subsurface, Air, Space, and C4I). This project was also to work closely with the T&E and certification communities in defining regression testing and certification requirements for all OA Commercial Off-the-Shelf upgrades and software reuse applications. This project seeks to create a strategic shift in the acquisition process to facilitate cooperative cross-domain/COI business relationships. This will improve economies of scale throughout the Navy. This development effort will identify the business case and return on investment for moving the Navy towards an open systems approach, support the development of open systems technologies, and integrate best practices for open systems development within Naval acquisition. This Naval OA project would have ensured Navy-wide system architectures would become extensible and scalable in function, capacity, and workload to meet Joint warfighting requirements. This also includes the identification and development of common software components, functions, and reuse methodologies. In summary, this funding supports only the management of a reuse repository and can be used to evolve business, systems engineering and cultural changes required across all Naval programs as they are migrated to function in a joint net
centric warfare environment.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Align the Naval Enterprise Across All Domains to Implement OA	5.571	0.170	0.200	0.000	0.200

Exhibit R-2A, **RDT&E Project Justification:** PB 2011 Navy		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603382N: *Advanced Combat Systems Tech*	**PROJECT** 0324: *Adv Combat System Technology*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: OA Enterprise Alignment: This funding supports the preparation and execution of the quarterly OA Executive Team Lead Council meetings and reporting requirements of the OA Executive Team (OAET). Specifically, this includes OA Executive Committee reporting of action items to DASN, monthly reports from the OA Chairman, fleet bi-weekly reports, report to Congress, quarterly domain execution reports, coordinating with OPNAV to review SPII efforts, as well as the annual OA budget submission and financial reporting for this project. Alignment across the Enterprise also includes the development and management of Implementation Road maps to ensure integration. *FY 2010 Plans:* OA Enterprise Alignment: This funding supports the preparation and execution of the quarterly OA Executive Team Lead Council meetings and reporting requirements of the OA Executive Team (OAET). Specifically, this includes OA Executive Committee reporting of action items to DASN, monthly reports from the OA Chairman, fleet bi-weekly reports, report to Congress, quarterly domain execution reports, coordinating with OPNAV to review SPII efforts, as well as the annual OA budget submission and financial reporting for this project. Alignment across the Enterprise also includes the development and management of Implementation Road maps to ensure integration. *FY 2011 Base Plans:* OA Enterprise Alignment: This funding supports the preparation and execution of the quarterly OA Executive Team Lead Council meetings and reporting requirements of the OA Executive Team (OAET). Specifically, this includes OA Executive Committee reporting of action items to DASN, monthly reports from the OA Chairman, fleet bi-weekly reports, report to Congress, quarterly domain execution reports, coordinating with OPNAV to review SPII efforts, as well as the annual OA budget submission and financial reporting for this project. Alignment across the Enterprise also includes the development and management of Implementation Road maps to ensure integration.					
Change the Naval and Marine Corps Cultures to Institutionalize OA Principle	0.868	0.350	0.335	0.000	0.335

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603382N: *Advanced Combat Systems Tech*	**PROJECT** 0324: *Adv Combat System Technology*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: OA Enterprise Communications and Training: This funding supports the activities to enable the cultural adoption of OA principles and practices through stakeholder management, communications, training, and OA Knowledge Management. Key activities include the development on an enterprise workforce training and education program and establishment of professional curricula (OA modular acquisition and OA systems engineering) with academia and Naval Institutes. This program plan includes participation, liaison, and coordination with multiple stakeholders including the OSD Open Systems Joint Task Force (OSJTF), Naval Post Graduate School, Defense Acquisition University (DAU), FORCEnet, Industry Days, and other communication vehicles, to ensure the optimal OA standards and technologies are identified and incorporated into Naval system acquisition. *FY 2010 Plans:* OA Enterprise Communications and Training: This funding supports the activities to enable the cultural adoption of OA principles and practices through stakeholder management, communications, training, and OA Knowledge Management. Key activities include the development on an enterprise workforce training and education program and establishment of professional curricula (OA modular acquisition and OA systems engineering) with academia and Naval Institutes. This program plan includes participation, liaison, and coordination with multiple stakeholders including the OSD Open Systems Joint Task Force (OSJTF), Naval Post Graduate School, Defense Acquisition University (DAU), FORCEnet, Industry Days, and other communication vehicles, to ensure the optimal OA standards and technologies are identified and incorporated into Naval system acquisition. *FY 2011 Base Plans:* OA Enterprise Communications and Training: This funding supports the activities to enable the cultural adoption of OA principles and practices through stakeholder management, communications, training, and OA Knowledge Management. Key activities include the development on an enterprise workforce training and education program and establishment of professional curricula (OA modular acquisition and OA systems engineering) with academia and Naval Institutes. This program plan					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603382N: *Advanced Combat Systems Tech*	PROJECT 0324: *Adv Combat System Technology*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
includes participation, liaison, and coordination with multiple stakeholders including the OSD Open Systems Joint Task Force (OSJTF), Naval Post Graduate School, Defense Acquisition University (DAU), FORCEnet, Industry Days, and other communication vehicles, to ensure the optimal OA standards and technologies are identified and incorporated into Naval system acquisition.					
OA Systems Engineering Leadership *FY 2009 Accomplishments:* Systems Engineering: This funding supports systems engineering collaboration across the enterprise to facilitate the fielding of interoperable capabilities including a) the alignment of PEO architectures (i.e. PEO IWS and PEO C4I); b) overseeing OA implementation efforts ensuring standardized and disciplined processes are utilized across domains (e.g. standards and interfaces, services); c) identifying and fostering "quick win" candidates and near-term proofs of concept for OPNAV to field additional capabilities at reduced costs; d) working with the S&T community to ensure OA remains relevant and coordinating on emerging technologies; and e) working with the T&E community and academia/industry partners to identify opportunities to reduce T&E expenses as a result of OA. *FY 2010 Plans:* Systems Engineering: This funding supports systems engineering collaboration across the enterprise to facilitate the fielding of interoperable capabilities including a) the alignment of PEO architectures (i.e. PEO IWS and PEO C4I); b) overseeing OA implementation efforts ensuring standardized and disciplined processes are utilized across domains (e.g. standards and interfaces, services); c) identifying and fostering "quick win" candidates and near-term proofs of concept for OPNAV to field additional capabilities at reduced costs; d) working with the S&T community to ensure OA remains relevant and coordinating on emerging technologies; and e) working with the T&E community and academia/industry partners to identify opportunities to reduce T&E expenses as a result of OA.	0.582	0.450	0.450	0.000	0.450

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603382N: *Advanced Combat Systems Tech*	PROJECT 0324: *Adv Combat System Technology*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Systems Engineering: This funding supports systems engineering collaboration across the enterprise to facilitate the fielding of interoperable capabilities including a) the alignment of PEO architectures (i.e. PEO IWS and PEO C4I); b) overseeing OA implementation efforts ensuring standardized and disciplined processes are utilized across domains (e.g. standards and interfaces, services); c) identifying and fostering "quick win" candidates and near-term proofs of concept for OPNAV to field additional capabilities at reduced costs; d) working with the S&T community to ensure OA remains relevant and coordinating on emerging technologies; and e) working with the T&E community and academia/industry partners to identify opportunities to reduce T&E expenses as a result of OA.					
Change Naval Processes and Business Practices Naval Business Practices: This funding supports the required activities of the OA Enterprise Team necessary to change Naval Business Practices including a) the development and refinement of policies, guidance and terminology required to establish a consistent approach for OA across the enterprise; b) the development and maintenance of analytical toolsets (i.e. OA Assessment Tool) to assist the Milestone Decision Authority, PM, and Resource Sponsor in assessing a programs openness, where appropriate, to make informed OA investment decisions; c) the implementation and refinement of OA Contract Guidance to be used in applicable procurements tailored as necessary to meet domain specific requirements; and d) the facilitation of design disclosure and cross-domain component reuse to reduce costs and enable more effective technology insertion including the development of an OA Enterprise Asset Repository Capability that incorporates a common end-user licensing agreement and enterprise configuration management processes that are open and accessible to all Naval and Joint programs and qualified vendors. During FY10 the funding will cover the Software Hardware Asset Reuse Enterprise (SHARE) effort. SHARE establishes a functional process and asset repository to publish government owned assets central to the OA strategy. This repository is key to the health and maturity of the Navy OA effort and serves as a pilot project that will ultimately spiral to an enterprise wide asset. Repository efforts are being transitioned to leverage lower cost alternatives.	2.237	0.700	0.673	0.000	0.673

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010	

| APPROPRIATION/BUDGET ACTIVITY
1319: *Research, Development, Test & Evaluation, Navy*
BA 4: *Advanced Component Development & Prototypes (ACD&P)* | | R-1 ITEM NOMENCLATURE
PE 0603382N: *Advanced Combat Systems Tech* | | PROJECT
0324: *Adv Combat System Technology* | |

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Naval Business Practices: This funding supports the required activities of the OA Enterprise Team necessary to change Naval Business Practices including a) the development and refinement of policies, guidance and terminology required to establish a consistent approach for OA across the enterprise; b) the development and maintenance of analytical toolsets (i.e. OA Assessment Tool) to assist the Milestone Decision Authority, PM, and Resource Sponsor in assessing a programs openness, where appropriate, to make informed OA investment decisions; c) the implementation and refinement of OA Contract Guidance to be used in applicable procurements tailored as necessary to meet domain specific requirements; and d) the facilitation of design disclosure and cross-domain component reuse to reduce costs and enable more effective technology insertion including the development of an OA Enterprise Asset Repository Capability that incorporates a common end-user licensing agreement and enterprise configuration management processes that are open and accessible to all Naval and Joint programs and qualified vendors. *FY 2010 Plans:* Naval Business Practices: This funding supports the required activities of the OA Enterprise Team necessary to change Naval Business Practices including a) the development and refinement of policies, guidance and terminology required to establish a consistent approach for OA across the enterprise; b) the development and maintenance of analytical toolsets (i.e. OA Assessment Tool) to assist the Milestone Decision Authority, PM, and Resource Sponsor in assessing a programs openness, where appropriate, to make informed OA investment decisions; c) the implementation and refinement of OA Contract Guidance to be used in applicable procurements tailored as necessary to meet domain specific requirements; and d) the facilitation of design disclosure and cross-domain component reuse to reduce costs and enable more effective technology insertion including the development of an OA Enterprise Asset Repository Capability that incorporates a common end-user licensing agreement and enterprise configuration management processes that are open and accessible to all Naval and Joint programs and qualified vendors. During FY10 the funding will cover the Software Hardware Asset Reuse Enterprise (SHARE) effort. SHARE establishes a functional					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603382N: *Advanced Combat Systems Tech*	PROJECT 0324: *Adv Combat System Technology*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
process and asset repository to publish government owned assets central to the OA strategy. This repository is key to the health and maturity of the Navy OA effort and serves as a pilot project that will ultimately spiral to an enterprise wide asset. Repository efforts are being transitioned to leverage lower cost alternatives. *FY 2011 Base Plans:* Naval Business Practices: This funding supports the required activities of the OA Enterprise Team necessary to change Naval Business Practices including a) the development and refinement of policies, guidance and terminology required to establish a consistent approach for OA across the enterprise; b) the development and maintenance of analytical toolsets (i.e. OA Assessment Tool) to assist the Milestone Decision Authority, PM, and Resource Sponsor in assessing a programs openness, where appropriate, to make informed OA investment decisions; c) the implementation and refinement of OA Contract Guidance to be used in applicable procurements tailored as necessary to meet domain specific requirements; and d) the facilitation of design disclosure and cross-domain component reuse to reduce costs and enable more effective technology insertion including the development of an OA Enterprise Asset Repository Capability that incorporates a common end-user licensing agreement and enterprise configuration management processes that are open and accessible to all Naval and Joint programs and qualified vendors. During FY10 the funding will cover the Software Hardware Asset Reuse Enterprise (SHARE) effort. SHARE establishes a functional process and asset repository to publish government owned assets central to the OA strategy. This repository is key to the health and maturity of the Navy OA effort and serves as a pilot project that will ultimately spiral to an enterprise wide asset. Repository efforts are being transitioned to leverage lower cost alternatives.					
DAWDF Defense Acquisition Workforce Development Fund	0.021	0.000	0.000	0.000	0.000

Exhibit R-2A, **RDT&E Project Justification:** PB 2011 Navy	**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603382N: *Advanced Combat Systems Tech*	**PROJECT** 0324: *Adv Combat System Technology*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Defense Acquisition Workforce Development Fund					
Accomplishments/Planned Programs Subtotals	9.279	1.670	1.658	0.000	1.658

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• R&D/0604307N /1447: *AEGIS Surf Combatant Combat Sys Imp*	192.206	177.699	193.933	0.000	193.933	212.064	223.936	219.051	179.551	Continuing	Continuing
• R&D/0604755N /2178: *Ship Self Defense System*	29.533	25.296	36.594	0.000	36.594	33.300	32.226	32.329	32.995	Continuing	Continuing
• R&D/0603582N /0164: *Common Network Interface*	13.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	13.500
• R&D/0603658N /2039: *Cooperative Engagement Capability*	38.637	56.351	52.282	0.000	52.282	45.559	44.614	45.621	46.492	Continuing	Continuing

D. Acquisition Strategy

This risk reduction effort evolved and shifted from a PEO IWS 1.0 task to Naval Surface Warfare Center (NSWC)/Dahlgren to an Assistant Secretary of the Navy, Research, Development & Acquisition (ASN-RDA) directed task to fund the Navy's OA Enterprise effort from this core OA. Budget line (policy statement dated 5 August 2004). The strategy was further refined in the Deputy Chief of Naval Operations (DCNO) requirement of 23 December 2005 (N6/7) with guidance for this effort to assist the Milestone Decision Authority (MDA), program managers, and resource sponsors in assessing enterprise program assets where appropriate. Office of the Chief of naval Operations (OPNAV) has directed this program to provide objective, measurable, performance based assessments as baselines for future system changes and spiral developments.

Exhibit R-2A, **RDT&E Project Justification:** PB 2011 Navy		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603382N: *Advanced Combat Systems Tech*	**PROJECT** 0324: *Adv Combat System Technology*

E. Performance Metrics

Successfully Manage the Open Architecture Enterprise Team and the OAET Lead Council. Change Naval Processes and business practices to utilize OA; Provide OA Systems Engineering to field common, interoperable capabilities; Change Navy and Marine Corps Cultures to Institutionalize OA Principles.

Exhibit R-3, **RDT&E Project Cost Analysis:** PB 2011 Navy | **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	PE 0603382N: *Advanced Combat Systems Tech*	0324: *Adv Combat System Technology*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SE/OA Domain Support	C/TBD	APL / Baltimore, MD Not Specified	0.725	0.000		0.000		0.000		0.000	0.000	0.725	Continuing
Systems Engineering	WR	NSWC / Dahlgren, VA Not Specified	11.253	0.700	Jan 2010	0.705	Nov 2010	0.000		0.705	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC/CRANE & Carderock Not Specified	2.062	0.000		0.000		0.000		0.000	0.000	2.062	Continuing
Systems Engineering	C/CPAF	Miscellaneous Not Specified	4.363	0.300	Dec 2009	0.253	Dec 2010	0.000		0.253	0.000	4.916	Continuing
OA DOMAIN SUPPORT	WR	NUWC/Newport, Spawar, Navair Not Specified	11.931	0.000		0.000		0.000		0.000	0.000	11.931	Continuing
SE/Signal Processor	C/CPAF	Lockheed Martin Not Specified	6.000	0.000		0.000		0.000		0.000	0.000	6.000	Continuing
SE/Signal Processor	C/CPAF	BAE Not Specified	0.300	0.000		0.000		0.000		0.000	0.000	0.300	Continuing
SE/Signal Processor	C/CPAF	Raytheon Not Specified	0.100	0.000		0.000		0.000		0.000	0.000	0.100	Continuing
SE/Signal Processor	WR	NSWC/DD, NRL, PHD Not Specified	0.600	0.000		0.000		0.000		0.000	0.000	0.600	Continuing
		Subtotal	37.334	1.000		0.958		0.000		0.958			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603382N: *Advanced Combat Systems Tech*		**PROJECT** 0324: *Adv Combat System Technology*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Industry Development	C/FP	IBM, ANGLE Not Specified	7.893	0.500	Jan 2010	0.500	Dec 2010	0.000		0.500	0.000	8.893	Continuing
Technical Data-Academia	WR	NPS-Monterey/DAU Not Specified	1.876	0.000		0.000		0.000		0.000	0.000	1.876	Continuing
Software Development	C/FP	MITRE, SEI Not Specified	0.309	0.000		0.000		0.000		0.000	0.000	0.309	Continuing
		Subtotal	10.078	0.500		0.500		0.000		0.500	0.000	11.078	

Remarks

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation	WR	NSWC/DD Not Specified	2.216	0.000		0.000		0.000		0.000	0.000	2.216	Continuing
OA Asset Repository (SBIR Account)	WR	Miscellaneous Not Specified	0.150	0.000		0.000		0.000		0.000	0.000	0.150	Continuing
		Subtotal	2.366	0.000		0.000		0.000		0.000	0.000	2.366	

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603382N: *Advanced Combat Systems Tech*	**PROJECT** 0324: *Adv Combat System Technology*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Support	C/CPAF	Miscellaneous Not Specified	2.651	0.170	Dec 2009	0.200	Dec 2010	0.000		0.200	Continuing	Continuing	Continuing
SBIR Assessment (Cong Add)	WR	NSWC/DD Not Specified	4.748	0.000		0.000		0.000		0.000	0.000	4.748	Continuing
DAWDF	C/TBD	Not Specified Not Specified	0.021	0.000		0.000		0.000		0.000	0.000	0.021	Continuing
		Subtotal	7.420	0.170		0.200		0.000		0.200			

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	57.198	1.670		1.658		0.000		1.658			

Remarks

Navy

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603382N: *Advanced Combat Systems Tech*	**PROJECT** 0324: *Adv Combat System Technology*

Fiscal Year	2009				2010				2011				2012				2013				2014				2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones																												
Incorporate OA Principles in Strategies, Contracts, Reviews, Requirements, & Other Documentation	△	△	△	△	△		△		△		△		△		△		△		△		△		△		△		△	
Change Culture through OA Education, Outreach, & Training	△	△	△	△		△		△		△		△		△		△		△		△		△		△		△		△
Conduct Program Assessments	△	△	△	△		△				△			△					△				△				△		
Adapt ONR Technologies	△	△	△	△	△		△		△		△		△		△		△		△		△		△		△		△	
OA Collaboration with Information Technology Management Council	△	△	△	△																								
Update Naval OA/FN Technical Stds																												
Publish Contract Guidebook Update				△				△				△			△				△					△				△
Host Contracting/Industry Symposium	△				△				△				△					△			△				△			
Deliver Report to Congress	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Conduct Lifecycle Affordability Pilot	△	△	△	△																								
Host OA Lead Council Meetings	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
OA Enterprise Asset Repository	△	△	△	△																								

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603382N: *Advanced Combat Systems Tech*	PROJECT 0324: *Adv Combat System Technology*

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Incorporate OA Principles in Acquisition Strategies and Contracts	1	2009	3	2015
Change Culture through OA Education, Outreach and Training	1	2009	4	2015
Conduct Program Assessments	1	2009	2	2015
Adapt ONR Technologies	1	2009	3	2015
OA Collaboration with Information Technology Management Council	1	2009	4	2009
Publish Contract Guidebook Update	4	2009	4	2015
Host Contracting/Industry Symposium	1	2009	1	2015
Deliver Report to Congress	1	2009	4	2015
Conduct Lifecycle Affordability Pilot	1	2009	4	2009
Host OA Lead Council Meeting	1	2009	4	2015
OA Enterprise Asset Repository Updates	1	2009	4	2009

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603382N: *Advanced Combat Systems Tech*	PROJECT 9999: *Congressional Adds*

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
9999: *Congressional Adds*	2.792	1.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.175
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Open Architecture/Maintenance Free Operating Period (MFOP)- This funding supports the pilot program for AN/BSY-10, co-sponsored with ASN (RDA), it incorporates software tools and hardware redundancy into Commercial Off-The-Shelf (COTS) based open architected systems such that the system self-checking and self-healing capabilities virtually eliminate at-sea open cabinet maintenance. This funding extends the application of OA/MFOP to investigate the adoption of MFOP tools in other Navy National Security Systems as an OA reusable component.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010

Congressional Add: OpenArchitecture/Maintenance Free Operating Period
 	
FY 2009 Accomplishments:
  1) Synthesized the MFOP system design and complete design review.
  2) Integrated the Common Network Interface (CNI) situational awareness application software to demonstrate tactical software reuse in the OA/MFOP platform
  3) Integrated the Remote Off Hull Maintenance Support (ROHMS) application software to demonstrate distance support IT networking reuse in the OA/MFOP platform
  4) Initiated and processed the TEMPALT (SCD 8375) for installation on USS IWO JIMA
  5) Initiated collaboration with SPAWAR to determine Information Assurance (IA) requirements
 	
FY 2010 Plans:
  1) Complete the OA/MFOP System Verification Testing
  2) Obtain IATO (IA Certification) allowing the OA/MFOP Demonstration system to connect to the Navy's SIPRnet for distance support communications.
	2.792	1.992

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
3) Finish Installation of the Demonstration System aboard LHD 7 4) Conduct the live Demonstration on a combatant platform (6 Month Test) 5) Report Lessons Learned		
Congressional Adds Subtotals	2.792	1.992

C. Other Program Funding Summary ($ in Millions)

  N/A

D. Acquisition Strategy

  N/A

E. Performance Metrics

  Successfully establish new methods for reducing lifecycle costs.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603382N: *Advanced Combat Systems Tech*	**PROJECT** 9999: *Congressional Adds*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NSWC Caderock Bethesda MD	0.000	1.992	Mar 2010	0.000		0.000		0.000	0.000	1.992	-0.001
Subtotal			0.000	1.992		0.000		0.000		0.000	0.000	1.992	-0.001

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	1.992		0.000		0.000		0.000	0.000	1.992	-0.001

Remarks

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